

ABSTRACT

A portable ranging and warning device adoptable to a variety of uses. The portable ranging and warning device uses a source of aimed wave energy to detect and recognize objects in proximity to the device. A beam of directed energy is sent from the device where it is reflected by the object and the reflected energy is received by a receiver on the device. A computer within the device can calculate the distance between the device and the object by the time delay between the pulsed directed energy beam and the return reflection. By sending sequential pulses of energy and varying the direction of the aim of the directed energy, a pattern of reflections may be stored in the computer's memory. This pattern of reflected energy may be compared to templates of reflected energy for particular objects. When there is a correlation between the reflected energy and the template, an object may be identified. The device then may take action based on that identification including generating warning through sound or visual displays.